



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/039,677	01/04/2002	Stephen Brian Falder	16644/09003CIP	9699
27530	7590	10/28/2008		
NELSON MULLINS RILEY & SCARBOROUGH, LLP				
1320 MAIN STREET, 17TH FLOOR				
COLUMBIA, SC 29201				
EXAMINER				
PRYOR, ALTON NATHANIEL				
ART UNIT		PAPER NUMBER		
1616				
MAIL DATE		DELIVERY MODE		
10/28/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

---

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/039,677

Filing Date: January 04, 2002

Appellant(s): FALDER ET AL.

\_\_\_\_\_  
Nichole T. Andrihetti  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 7/16/08 appealing from the Office action mailed 1/24/08.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

6,656,923

TRINH ET AL

12-2003

### **(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,46,52,53,61,62,70,71,78,82-85,88-92,95-100,105-107,111-113,115-137 are rejected under 35 U.S.C. 103(a) as being unpatentable over Trinh et al (USPN 6656923; 12/2/03). Trinh teaches an uncomplexed cyclodextrin composition comprising a cyclodextrin. Trinh teaches that the composition can comprise other ingredients such as water, surfactants and antimicrobial actives. See abstract, column 4 line 45 – column 6 line 21. Trinh teaches that the composition can comprise dimethyl polysiloxanes (hydrophobic) and an antimicrobial active. See column 9 line 47 – column 13 line 38 especially column 11 line 48 – column 12 line 63. Trinh teaches that such compositions provide superior antimicrobial activity. See column 4 lines 34-42. Trinh teaches that the antimicrobial active can be a quaternary ammonium compound such as Hyamine 1622 - hydrophilic (see column 13 line 47 – column 15 line 56 especially column 15 line 34) which meets the structural attributes of the instantly antimicrobial, i.e. Hyamine 1622 is

a quaternary ammonium compound having the general formula  $R_1R_2R_3R_4N^+X^-$ , in which one or two of the R groups alkyl substituted by aryl or interrupted by aryl or heteroatom (oxygen) and the other R groups are C1 to C4 alkyl groups. Trinh teaches that to the cyclodextrin composition can be added phenolic compounds such as chloroxylenol, and isothiazolinones. See column 19 line 47 – column 20 line 44 especially column 20 lines 4, 21-23, column 24 lines 18-39. Trinh teaches a method of applying the composition to fabric (functional material). See abstract. Column 46 lines 23-59. It is an inherent property for antimicrobial active in a composition, after being applied to an object, to control microbe growth. Note, the simple act of combining and mixing ingredients is common in this art therefore the method of making the composition as described in claim 99 is not patentable. Trinh does not exemplify an invention specifically comprising dimethyl polysiloxane and Hyamine 1622. However, it would have been obvious to one having ordinary skill in the art to make such as invention. One would have been motivated to do this since Trinh encourages the making of compositions comprising uncomplexed cyclodextrin, Hyamine 1622 and dimethyl polysiloxane. See above. Note it is not necessary for Trinh to exemplify all possible combinations of ingredients suggested in order to make an invention obvious.

#### **(10) Response to Argument**

The Appellants argue that 1) Trinh et al. fail to teach a compound such as a polydimethylsiloxanes which has a low surface tension of from 8 to 14 mN/m as instantly claimed, 2) Trinh et al. teach polyalkylene oxide polysiloxanes having a dimethyl polysiloxane hydrophobic moiety and one or more hydrophilic polyalkylene

side chains rather than the claimed polydimethylsiloxane, i.e. polyalkylene oxide polysiloxanes are not polydimethylsiloxanes, 3) polyalkylene oxide polysiloxanes are not structurally similar to the polydimethylsiloxanes as recited in instant claims, i.e. instant claims do not teach a polysiloxane connected to a polyalkylene oxide, 4) polyalkylene oxide polysiloxanes have significantly different physical properties than the polydimethylsiloxanes as claimed; USPN 5543048 teaches that polyalkylene oxide polysiloxanes are structurally different from polydimethylsiloxanes, 5) Dr. Schwarz's declaration filed 1/ 8/07 provides unexpected results for a Byotrol composition comprising coco alkyl dimethylbenzyl ammonium chloride [compound (i)a in claim 1], di-n-decyl dimethylbenzyl ammonium chloride [compound (i) b in claim 1] combined with a CLEARCO composition comprising decamethylcyclopentasiloxane (compound ii in claim 1), 6) Dr. Schwarz's declaration filed 1/8/07 provide unexpected results for a BAC composition comprising coco alkyl dimethylbenzyl ammonium chloride [compound (i)a in claim 1] combined with an Active Silicone composition comprising polydimethylsiloxane (compound ii in claim 1) or a CLEARCO composition comprising decamethylcyclopentasiloxane (compound ii in claim 1) or PS034 composition comprising hexamethyldisiloxane (compound ii in claim 1), Dr. Schwarz's declaration filed 1/8/07 provides unexpected data for a Marquat MQ624M composition comprising octyl decyl dimethyl ammonium chloride [compound (i) b in claim 1] plus didecyl dimethyl ammonium chloride [compound (i) b in claim 1] plus dioctyl dimethyl ammonium chloride [compound (i) b in claim 1] plus dimethyl benzyl ammonium

chloride [compound (i) c in claim 1] combined with polydimethyl siloxane [compound ii in claim 1]

Appellant argues that dimethyl polysiloxane taught by Trinh is structurally different from the polydimethylsiloxane recited in instant claims. However the Examiner argues that the dimethyl polysiloxane taught by Trinh is structurally similar to the polydimethylsiloxane recited in instant claims. The applicants provide no showing of how Trinh's dimethyl polysiloxane which is structurally similar to polydimethylsiloxane would affect the properties of the antimicrobial composition claimed differently from the instant polydimethylsiloxane. Note on pages 9-10 of Appellant's Appeal Brief, the Appellants provide a generic structure for the claimed polydimethylsiloxane as recited by the Merck Index at 3260 as well as a generic structure for the polyalkylene oxides of Trinh et al. The Appellants states that the siloxane structures are different and that Trinh et al. siloxane structures do not make instant siloxane structures obvious. The Examiner disagrees. The Examiner points out that Trinh et al. siloxane structures have repeating units of the instant polydiemthylsiloxane strutures. Therefore, Trinh et al. siloxane structures are related to instant structures as homlogs. In the absence of unexpected results homologs are obvious over one another, i.e. Trinh et al. siloxane structures make instant siloxanes obvious because the two are related homologs. The Appellants further argue that instant polydimethylsiloxane does not have an attached polyalkylene oxide chain. The Examiner would like to point out that the claim recites polydimethylsiloxanes broadly which makes any compound having a dimethylsiloxane group an obvious species falling within the polydimethylsiloxane genus. Note, the

Appellants point out that Trinh et al. siloxane comprises a dimethyl siloxane group. Trinh et al. siloxanes containing a dimethylsiloxane group would make it an obvious species within the polydimethylsiloxane genus. Based on this interpretation, the instant siloxanes are similar to Trinh et al.'s siloxanes and therefore the two siloxanes would possess similar physical properties. This argument addresses Appellants statement recited from USPN 5543048 regarding the difference between the two siloxanes. The Examiner argees that the Appellants provide unexpected results for the composition stated in Dr. Schwarz's declarations. However, the Examiner points out that the Appellants' claims are not commensurate in scope with Dr. Schwarz's declarations and that the declarations do not overcome the 103(a) rejection argued above.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Alton N. Pryor/

Primary Examiner, Art Unit 1616

Conferees:

/Johann R. Richter/

Supervisory Patent Examiner, Art Unit 1616



/Ardin Marschel/

Supervisory Patent Examiner, Art Unit 1614